

STATE OF GEORGIA REVISED TMDL IMPLEMENTATION PLAN WATERSHED APPROACH Oconee River Basin

Local Watershed Governments
Central Savannah River Area RDC
Baldwin County
Hancock County
Putnam County

The Code of Federal Regulations 40 CFR 130.33(b)(10) requires States to include an implementation plan as part of a TMDL development and submittal. **With input from appropriate stakeholder groups, a TMDL Implementation Plan has been developed for a cluster of impaired waterbody segments and the corresponding pollutants.** The impaired waterbody segments are located in the same sub-basin identified by a HUC10 code (Figure 1).

This Implementation Plan addresses an action plan, education/outreach activities, stakeholders, pollutant sources, and potential funding sources affecting the sub-basin. In addition, the Plan describes (a) regulatory and voluntary practices/control actions (*management measures*) to reduce target pollutants, (b) milestone schedules to show the development of the management measures (*measurable milestones*), (c) a monitoring plan to determine the efficiency of the management measures and measurable milestones, and (d) criteria to determine whether substantial progress is being made towards reducing pollutants in impaired waterbodies. The overall goal of the Plan is to define a set of actions that will help achieve water quality standards in the state of Georgia. Following this section is information regarding individual segments.

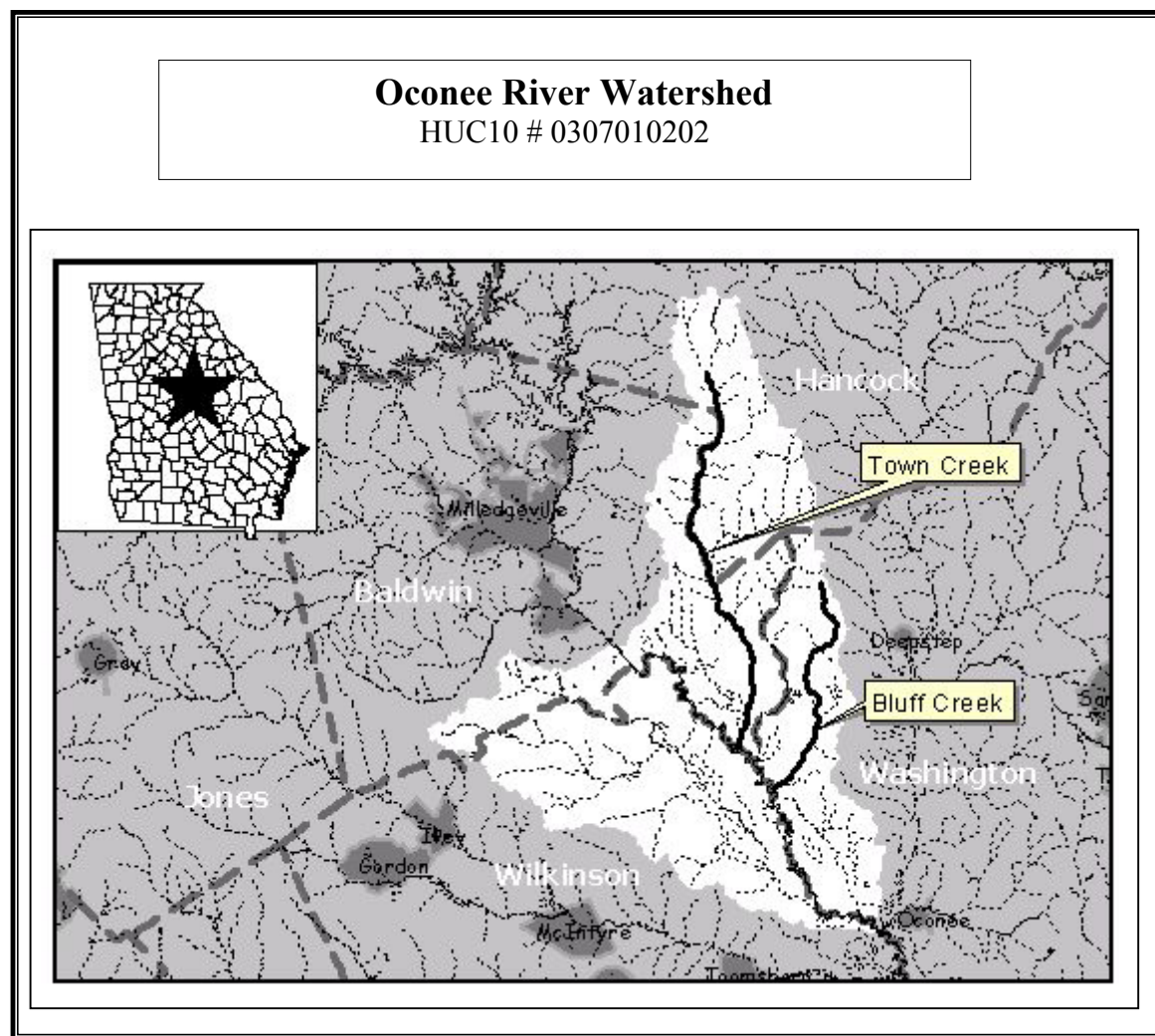


FIGURE 1

Impaired Waterbody*	Impaired Segment Location	Impairment
1. Buff Creek	Downstream Wiggins Road to Oconee River	pH
2. Town Creek	Peavy Branch to Oconee River	FC

*These Waterbody Numbers are referenced throughout the Implementation Plan.

Action Plan for Oconee River Watershed

Oconee River Watershed
HUC10 - 0307010202

POLLUTANT:	SOURCE:	EFFECT:	WHAT CAN I DO?	
			At Home: Community, School	At Work: Business, Government
<input type="checkbox"/> Dissolved Oxygen (DO) <input type="checkbox"/> Fecal Coliform (FC) <input type="checkbox"/> Sediment <input type="checkbox"/> Metals <input type="checkbox"/> Fish Consumption Guidelines (FCG) <input checked="" type="checkbox"/> Other (Please List) pH Fecal Coliform	<input type="checkbox"/> Industrial <input type="checkbox"/> Urban <input type="checkbox"/> Agriculture <input type="checkbox"/> Forestry <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Other (Please List) Naturally Occurring Naturally Occurring	<input checked="" type="checkbox"/> Habitat <input type="checkbox"/> Recreation <input type="checkbox"/> Drinking Water <input checked="" type="checkbox"/> Aesthetics <input type="checkbox"/> Other (Please List)	<p>Help the county and cities meet this TMDL (by <u>reducing sedimentation</u> in the creeks and by <u>reducing the velocity</u> of stream flow during and after rain storms) by doing the following:</p> <ul style="list-style-type: none"> • Learn more about erosion and sedimentation • Cease mowing stream buffers • Teach students about erosion and sedimentation and the effects on water quality and land use quality <p>Start or help fund an Adopt-A-Stream in your neighborhood</p>	<p>Help the county and cities meet this TMDL (by <u>reducing sedimentation</u> in the creeks and by <u>reducing the velocity</u> of stream flow during and after rain storms) by doing the following:</p> <ul style="list-style-type: none"> • Learn more about erosion and sedimentation • Cease mowing stream buffers • Start or help fund an Adopt-A-Stream club at your business • Government can enforce ordinances already in place • Farmers can suggest to county reps to provide incentives for stream buffer protection • Farmers can reduce sedimentation at individual sites with government help • Silviculture industry can look for ways to reduce sedimentation

INFORMATION/EDUCATION/OUTREACH ACTIVITIES

An education/outreach component will be used to enhance public understanding of and participation in implementing the TMDL Implementation Plan.

List of all previous and planned information/education/outreach activities.

Responsible Organization Or Entity	Description	Impacted Waterbodies*	Target Audience	Anticipated Dates (MM/YY)
CSRA RDC	Contracted with GA EPD to provide TMDL Implementation Planning	1,2	CSRA RDC region (east Georgia)	Continuous
Georgia Forestry Commission	Conduct forestry Best Management Practices education training at Master Timber Harvester and continuing logger education programs, civic programs, and landowner meetings.	1,2	Foresters, timber buyers and loggers, site preparation contractors, landowners	Continuous
UGA – Agriculture and Applied Economics	Recently received a Section 319 grant to establish a database of private landowners who would be willing to work with NRCS to protect streamside or riparian areas that are vulnerable	1,2	Private landowners	05/02-09/05
USDA Farm Service Center	Sandersville office of farming technical assistance	1,2	Agricultural Community	Continuous
USDA-NRCS	The Natural Resources Conservation Services (NRCS) provides money and assistance to private landowners who wish to help conserve soil and water	1,2	Private landowners	Continuous

STAKEHOLDERS

EPD encourages public involvement and the active participation of stakeholders in the process of improving water quality. Stakeholders can provide valuable information and data regarding their community and the impaired water bodies and can provide insight and/or implement management measures.

List of local governments, agricultural organizations or significant landholders, commercial forestry organizations, businesses and industries, and local organizations including environmental groups and individuals with a major interest in this watershed.

[illegible]

WATER BODIES/STREAMS COVERED IN THIS PLAN:

These impaired waterbody segments are located in the same sub-basin identified by a HUC10 code. Most of the information contained in this section comes from the 303(d) list and has been completed by employees of the EPD Water Protection Branch.

Waterbody Name #1	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Bluff Creek	Downstream Wiggins Road to Oconee River	4	Fishing	NS
Primary County	Secondary County	Second RDC	Source (Point/ Nonpoint)	
Washington			Nonpoint	
Pollutants	Water Quality Standards	Required Reduction	TMDL ID	Date TMDL Established
PH	6.0-8.5 Std. units			February 2002

Waterbody Name #2	Location	Miles/Area Impacted	Use Classification	Partially Supporting/ Not Supporting (PS/NS)
Town Creek	Peavy Branch to Oconee River	4	Fishing	PS
Primary County	Secondary County	Second RDC	Source (Point/ Nonpoint)	
Hancock	Baldwin	Middle Georgia	Nonpoint	
Pollutants	Water Quality Standards	Required Reduction	TMDL ID	Date TMDL Established
Fecal Coliform	1,000 per 100 ml (geometric mean Nov-April) 200 per 100 ml (geometric mean May-Nov)	88.5%		January 2002

POLLUTANT SOURCES

It is important to recognize the potential source(s) causing water quality impairment. Each source must be controlled to comply with target TMDL/Load Allocations for each pollutant. Included is a description of how the sources contribute to the impairment and the waterbody that is impaired.

List of major nonpoint source categories and sub-categories or individual sources (Urban Runoff, Agriculture, Forestry, Municipal Sewage Treatment Plant)

Pollutant	Sources of Pollutants	Description of Contribution To Impairment	Impacted Waterbodies*
Fecal Coliform	Agriculture	Possible introduction of animal waste from upslope practices and sediment from stormwater runoff when BMP's are not followed	Town Creek
Fecal Coliform	Residential	Possible introduction of discharges resulting from septic tank runoff and littering from nearby residential areas, including the City of Milledgeville	Town Creek
Fecal Coliform	Municipal (Stormwater Runoff)	Possible introduction of storm water runoff from municipal areas (City of Milledgeville)	Town Creek
Fecal Coliform	Municipal (Wastewater)	Possible introduction of wastewater discharges from City of Milledgeville	Town Creek
pH	Natural		Bluff Creek

MANAGEMENT MEASURES, MEASURABLE MILESTONES AND SCHEDULE:

(i.e. Local codes and ordinances, Erosion and Sedimentation Control, Storm Water Management, Local water resource monitoring)

The following table lists management measures that have been or will be implemented to achieve water quality standards and the load reductions established in the TMDL. The management measures, including regulatory or voluntary actions or other controls by governments or individuals, specifically apply to the pollutant and the waterbody for which the TMDL was written. A description is provided of how these management measures are/will be accomplished through reliable and effective delivery mechanisms, and how these management measures are/will help achieve the target TMDL. Included is the source of the pollutant, anticipated/past effectiveness of the management measure (very effective, somewhat effective, not effective), the current status (i.e. enforced, in-progress, planning), and measurable milestones and schedule. Milestones are used to measure progress in attaining water quality standards and to determine whether management measures are being implemented.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Georgia Water Quality Control Act (OCGA 12-5-20)	Georgia DNR, EPD	Makes it unlawful to discharge excessive pollutants into waters of the state in amounts harmful to public health, safety or welfare, animals or the physical destruction of stream habitat	1964	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform	Agriculture, Residential, Municipal	Town Creek	Effective in point source pollution in dealing with local governments and industry/Limited effectiveness in dealing with non point sources.

Measurable Milestones	Schedule		Comments
	Start	End	
Land Use Application System Permits NPDES Permits	1964	Ongoing	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Agricultural BMPs	Georgia Soil and Water Conservation Service, Georgia Department of Agriculture	Leads effort in agricultural water quality program, develops agricultural BMP educational and monitoring efforts.	1987	Current	Voluntary

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform	Pesticide management, animal facility runoff, irrigation water management	Town Creek	Utilization of BMPs has been found to be effective in controlling runoff and other contaminants from farming practices.

Measurable Milestones	Schedule		Comments
	Start	End	
Waste Storage Structure, Conservation Tillage, Waste Storage Pond, Diversion Fencing, Field Borders, Filter Strips, Stock Trails/Walkways, Stream/Shoreline Protection, Nutrient Management, Well Protection, Land Use Application System Permits and NPDES Permits	1987	Ongoing	Additional BMPs possible depending on results of future monitoring/Work with local governments and others to increase monitoring of Land Use Application System Permits and NPDES Permits

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Nutrient Application Plan	Natural Resources Conservation Service	Leads effort in agricultural water quality by developing plans to control nutrient runoff	2000	Current	Voluntary
Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness		
Fecal Coliform	Pesticide management, irrigation water management	Town Creek	Effective in the initial stages of the program's beginning if plans are followed properly		
Measurable Milestones		Schedule		Comments	
		Start	End		
Increase the number of farming establishments utilizing nutrient application plans to limit nutrient runoff		2000		Ongoing	

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Comprehensive Nutrient Management Plan (CNMP)	Agricultural Extension Service, Department of Natural Resources	Leads effort in agricultural water quality by developing plans to control animal waste runoff	2001	Current	Regulatory
Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness		
Fecal Coliform	Animal Facility Runoff	Town Creek	Effective in the initial states of the program's beginning if the plans are carried out properly		
Measurable Milestones		Schedule		Comments	
		Start	End		
Increase the number of farming establishments implementing plans/Encourage increased compliance with plan requirements		2001	Ongoing		

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Georgia Erosion and Sedimentation Control Act (OCGA 12-7-1)	Georgia Department of Natural Resources Environmental Protection Division and Local Governments	Authorizes local governments to adopt a comprehensive ordinance governing land-disturbing activities within local planning and zoning jurisdictions and require the use of BMPs	Amended 2000	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform	Agricultural, Residential, Municipal	Town Creek	Effectiveness is minimal due to a lack of local enforcement of erosion and sedimentation control measures

Measurable Milestones	Schedule		Comments
	Start	End	
Local erosion and sedimentation control measures	2003	Ongoing	Work with local governments to obtain a greater enforcement of erosion and sedimentation control measures at the local level.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/ Projected Date	Status	Regulatory/ Voluntary
Georgia Planning Act (OCGA 12-2-8)	Georgia Department of Natural Resources and Local Governments	Authorized DCA to develop minimum planning standards and procedures that local government planning and zoning jurisdictions could adopt and enforce pertaining to the protection of river corridors, mountains, water supply watersheds, groundwater recharge areas, and wetlands.	1989	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform	Agricultural, Residential, Municipal	Town Creek	Effectiveness is limited because of lack of land use management regulations at the local level

Measurable Milestones	Schedule		Comments
	Start	End	
Land Use Management Regulations	2003	Ongoing	Need to work with local governments to establish land use management regulations and other regulations as appropriate/Need to work with local governments in enforcing DNR's Part 5 Environmental Planning criteria to better protect local streams.

Regulation/Ordinance or Management Measure	Responsible Government, Organization or Entity	Description	Enacted/Projected Date	Status	Regulatory/Voluntary
Local Septic Tank Permit Ordinance	Georgia Department of Human Resources and Local Governments	Authorizes the regulation of septic tanks, including placement, installation and maintenance	1969	Current	Regulatory

Pollutant(s) Affected	Sources of Pollutant(s)	Impacted Waterbodies*	Anticipated or Past Effectiveness
Fecal Coliform	Residential	Town Creek	Effective at point of construction and poor at point of post-construction follow up maintenances

Measurable Milestones	Schedule		Comments
	Start	End	
Continuous updating of health inspector manual to upgrade current standards	1969	Ongoing	

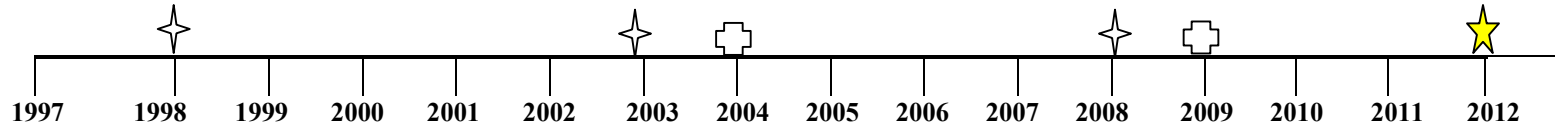
POTENTIAL FUNDING SOURCES:

The identification and discussion of dedicated funding is important in determining the economic feasibility of the above-mentioned management measures.

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PROJECTED ATTAINMENT DATE

The projected date to attain and maintain water quality standards in this watershed is 10 years from acceptance of the TMDL Implementation Plan by EPD.



EPD Monitoring 
 Evaluate TMDL & Attainment Date 
 Project Attainment 

MONITORING PLAN

The purpose of this monitoring plan is to determine the effectiveness of the target TMDL and the management measures being implemented to meet water quality standards. List of previous, current or planned/proposed sampling activities or other surveys. (Monitoring data that placed stream on 303(d) list will be provided if requested.)

Name Of Regulation / Ordinance Or Management Measure	Organization	Impacted Waterbodies*	Pollutants	Purpose/Description	Time Frame		Status (Previous, Current, Proposed)
					Start	End	
Forest Water Quality Program	GFC	Town Creek	Fecal Coliform	BMP Education			Current
	GFC	Town Creek	Fecal Coliform	Complaint Investigation			Current
	GFC	Town Creek	Fecal Coliform	BMP Monitoring monthly assurance exams			Proposed
EPA/EPD TMDL Monitoring Program	US EPA	Town Creek; Bluff Creek	Fecal Coliform; pH	Used to develop TMDL			Previous
NPDES Compliance	EPA	Town Creek; Bluff Creek	Fecal Coliform; pH	Point Source compliance			Current

CRITERIA TO DETERMINE WHETHER SUBSTANTIAL PROGRESS IS BEING MADE:

The following set of criteria will be used to determine whether any substantial progress is being made towards reducing pollutants in impaired waterbodies and attaining water quality standards. Discussion on each criteria is recorded in the space provided. Additional relevant criteria are presented in comments.

Percent of concentration or load change (monitoring program) _____

If monitoring results show that it is unlikely that the TMDL will be adequate to meet water quality standards, revision of the TMDL may be necessary.

- Categorical change in classification of the stream (delisting the stream is the goal) _____

- Regulatory controls or activities installed (ordinances, laws) _____

- Best management practices installed (agricultural, forestry, urban) _____

COMMENTS

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**Environmental Protection Division of the Department of Natural Resources,
State of Georgia.**

TOGETHER WE CAN MAKE A DIFFERENCE!
